adic   # Release Notes

Product: FileServ® for UNIX® Version 4.4.1

Operating Systems: IRIX® 6.5.6M, 6.5.7M, 6.5.8M, 6.5.9M and 6.5.10M
SPARC™ Solaris™ 7 and 8

Date: October 8, 2001

NOTE: (1) The operating system must always be run in US_English. (2) FileServ supports the maintenance (M) version of IRIX 6.5.x, as opposed to the feature (F) version. (3) To obtain details on supported application server platforms, contact your FileServ sales representative.

Contents

Prerequisites

Before installing FileServ, install the software listed in the table below:

Software	IRIX	Solaris
A valid ANSI C compiler	X	X
Perl 5	X	X
Veritas Vxfs Version 3.3.3 + patch1	-	X
VolServ®	X	X

Purpose of This Release

This release contains corrections to problems encountered in previous versions.

Fixed Problems

The following table lists fixed problems:

Operating System	Problem Number	Description of Problems Fixed in Version 4.4.1
All	564	When the db map is created in fsaudit, all directories in dirdb are added. The update_mask field in the db map entry indicates whether or not the directory should be there. This field was not being initialized, so directories were occasionally being reported as missing even though they existed.
All	568	fsrecover was failing because of memory requirements that were caused by the journal_table being calloc for every record in the journal but not being freed before the calloc. fsrecover is now freeing the journal_table memory.
All	570	For veritas vxfs filesystems, an overwrite of an existing file that has a valid tape copy will generate two events: a create and a truncate. The file object is locked by the filesystem until both events are processed. This causes a potential deadlock in the dmapi process if the create list is processed before the truncate event is processed. To prevent this deadlock, the dmapi process was modified so the create list is processed by a separate thread.
All	572	Changed the EMASS logo to the ADIC logo on the FileServ graphical user interface (fswin gui).

Known Problems

The following table lists unresolved problems:

Operating System	Problem Number	Description of Known Problems in Version 4.4.1
IRIX Solaris	588 936 958	When fsundelete command is executed, occasionally it does not completely undelete all the files on the undelete list because of a timing issue. ***Workaround***: To overcome this problem, run the fsundelete command again on the unrestored file(s). The fsundelete command does not retrieve any secondary copies of files that were deleted, only the primary copy is retrieved. Do not use the -f option (force) with the command on a file that resides on disk only. The command will fail and an error message will appear instructing you how to correctly execute the command.
IRIX Solaris	904	Occasionally, the fsrmcopy command incorrectly reports that it successfully removed a file. This happens if the file is open and fsrmdiskcopy is run on that file. ***Workaround***: To ensure that the file was removed, run fsfileinfo again. To successfully run the fsrmcopy command on a file, the user must have read, write or execute permissions.

Documentation

In addition to the FileServ software, the distribution CD contains the FileServ technical documentation as PDF files as well as an Adobe® Acrobat® Reader. The Reader allows you to view and navigate the electronic book files yet preserves the page design and graphics from the printed books.

Order Printed Books

To order additional printed books, complete this form and send it to your ADIC Sales Representative:

Version 4.4 Book	Quantity	Version 4.4 Book	Quantity
FileServ Overview, #601341		Error Messages, #601345	
Installing FileServ, #601342		Quick Reference Card, #601346	
Command Reference, #601343		Complete Set. Contains all 5 books and one Quick Reference Card.	
Administrative Tasks, #601344			
Please print Name:			
Company:			
Address:			
Telephone:		Email:	

Related Publications

To receive access to the secured site on our home page containing technical product information (Release Notes, Product Alerts, Product Bulletins, FAQs), visit http://partners.adic.com/ and follow the password request procedure. In return, ADIC will send you instructions and a password.

Supported Drives

FileServ supports the following drives on the specified platforms:

Drive Type	Supported on IRIX	Supported on Solaris
Ampex DST 310 Ampex DST 312 See **NOTE** below.	Yes	No
Fujitsu M8100. Configure this drive as an IBM 3590B1A.	Yes	Yes
HP 2600FX MO HP 5200EX MO	Yes	No
IBM 3590B1A IBM 3590E1A. Do not configure these drives on an RS-422 port.	Yes	Yes
IBM 3580 LTO	No	Yes

Drive Type	Supported on IRIX	Supported on Solaris
Quantum DLT 4000 Quantum DLT 7000. Configure this drive as a DLT 4000. Quantum DLT 8000. Configure this drive as a DLT 4000.	Yes	Yes
Sony AIT-1 SDX-300 Sony AIT-2 SDX-500	Yes	Yes
Sony GY-10 Sony GY-2120 Sony GY-8240.See "Modify IRIX Kernel for SONY DTF-2 Drive" on page 5 of these"Release Notes." During initial configuration on VolServ, set these drives up to support both DTF1 and DTF2 media types.	Yes	Yes
Storage Technology 4480 Storage Technology Timberline 9490-E Storage Technology 9840	Yes	Yes
NOTE: To tune the kernel for DST drives, follow the steps below: Step 1: Login as **root**. Step 2: Run **systune -i**. Step 3: Enter **maxdmasz 513**. Step 4: Enter **quit.** Step 5: Reboot the system.		

Update `sysparm` **File with Media Capacity**

After an initial installation, if you add or change a Sony AIT-2, IBM 3590E1A, Quantum DLT 7000, or Quantum DLT 8000 drive type, update the system parameters to reflect the new media capacity by following the steps below:

Step 1. Log in as `root`.

Step 2. Edit the `fs_sysparms` file.

```
# vi /$FS_HOME/sysparms/fs_sysparms
```

Step 3. If you are adding an AIT-2 drive, update the `DEF_MED_SPC_AIT` parameter definition to be as shown below if you are using 170m tape:

```
DEF_MED_SPC_AIT=35000000000;
```

If you are adding an AIT-2 drive, update the `DEF_MED_SPC_AIT` parameter definition to be as shown below if you are using 230m tape:

```
DEF_MED_SPC_AIT=50000000000;
```

If you are adding an 3590E1A drive, update the `DEF_MED_SPC_3590` parameter definition to be as shown below:

```
DEF_MED_SPC_3590=20000000000;
```

If you are adding a DLT 7000 drive, update the `DEF_MED_SPC_CTIV` parameter definition to be as shown below:

```
DEF_MED_SPC_CTIV=35000000000;
```

If you are adding a DLT 8000 drive, update the `DEF_MED_SPC_CTIV` parameter definition to be as shown below:

```
DEF_MED_SPC_CTIV=40000000000;
```

Step 4.   Save the changes and quit the edit session.

Modify IRIX Kernel for SONY DTF-2 Drive

IRIX only: Update the SGI kernel to be aware of the SONY DTF-2 drive, by following the steps below:

Step 1.   Log in as `root`.

```
# su root
```

Step 2.   Search the `scsi` file and look for the words "GY-8240."

```
# vi /var/sysgen/master.d/scsi
```

Step 3.   If that text is not found, add the following entry to the file for your drive:

```
 /* SONY GY-8240 drive */
{ SONYGY, TPGY2120, 4, 7, "SONY", "GY-8240", 0, 0, {0, 0, 0, 0},
MTCAN_BSF|MTCAN_BSR|MTCANT_RET|MTCAN_CHKRDY|MTCAN_PREV|
MTCAN_SEEK|MTCAN_APPEND|MTCAN_SILI|MTCAN_VAR|MTCAN_SETSZ|
MTCAN_CHTYPEANY | MTCAN_COMPRESS,
20, 100*60, 10*60, 9*60, 9*60, 16384, 256*1024,
tpsc_default_dens_count, tpsc_default_hwg_dens_names,
tpsc_default_alias_dens_names,
{0}, 0, 0, 0,
0, (u_char *)0 },
```

Step 4. Rebuild the kernel.

```
# autoconfig -f
```

Step 5. Reboot the machine.

Compatibility with VolServ®

FileServ	VolServ
Version 4.4.1 Version 4.4 Version 4.3 Version 4.2 Version 4.1 Version 4.0	Version 5.0 Version 4.1 **NOTE**: The release numbering scheme has been changed on VolServ to correlate with the release numbers on FileServ. Version 3.0 Version 2.3.3
Version 3.5.2 Version 3.5.1 Version 3.5.0	Version 2.3.3 Version 2.3.2 Version 2.3.1
Version 3.4.3	Version 2.3.3 Version 2.3.2 Version 2.3.1
Version 3.4.2 Version 3.4.1	Version 2.3.2 Version 2.3.1
Version 3.4	Version 2.3.1

Operating System Requirements

Patches

NOTE: ADIC recommends that you install all required Y2K patches for your machine.

Make sure you install all the patches that your vendor recommends for your kernel, operating system, network, hardware, media, drive type, and storage devices.

Additionally, ADIC requires the patches, filesets, or packages listed below to successfully operate FileServ. Obtain these patches from the appropriate vendor.

Platform	Patch	Description
IRIX 6.5.8f	SG0004026	Fixes lost read events. Even though the feature release is not officially supported, if you choose this release you must have this patch.
Solaris 7	Update 2107022-04	Maintenance update.
	107587-01	System accounting, (Usr).
	Recommended Patch Cluster 09/02/1999	Includes nine patches.

YEAR 2000 COMPLIANT (CR #237)

When FileServ is running on Y2K-compliant operating systems, including systems with Y2K-compliant patches, FileServ is Y2K Option 1-compliant. This means that a year is designated as a four-digit number, for example, 2000. (FileServ has been Y2K-compliant since Version 3.5.)

Operating Issues

fileserv -t -y LEAVES UNWANTED PROCESSES RUNNING (CR #921)

- Running `fileserv -t -y` unconditionally exits after the number of seconds specified in the `sysparm` value configured in the `$FS_TERMTIMEOUT_VALUE` parameter. After FileServ terminates, there may be unwanted processes still running. To check for these processes, type the following:

```
# ps -elf | grep fs_
# ps -elf | grep fsadm
```

Look for processes that should not be running, and determine which ones need to be terminated.

fsloglevel COMMAND (CR #829)

- The `fsloglevel` command does not affect all log messages. A more reliable method for changing the logging level is to modify the `FS_LOG_LEVEL` variable in the `$FS_HOME/sysparm/fs_sysparm` file.

fspolicy COMMAND

- Running the `fspolicy -w` command on a large (greater than 500,000 entries) file system can take several hours to complete. If the `fspolicy` command is unable to store or truncate files, or if the `fspolicy` command is killed or terminates abnormally, run `fspolicy -w` to rebuild the candidate files.

GUI PERFORMANCE (CR #296)

- Before running another command in the GUI, select the <Dismiss> button and the remove the Status Window. Performance problems may occur if this is not done.

Installation and Upgrade Issues

If you are installing FileServ or upgrading an existing FileServ installation, review the following topics to make sure FileServ is correctly installed. For complete and detailed installation instructions, refer to the I*nstalling FileServ* book.

Turn off `mediad` on SGI Platforms

If you install FileServ on an SGI platforms running IRIX 6.5.x, turn off the `mediad` for FileServ-managed storage devices by following the steps below:

Step 1. Log in as `root`.

```
# su root
```

Step 2. Edit the `mediad.config` file.

```
# vi /etc/config/mediad.config
```

Step 3. Add the following statement for each FileServ-managed storage device:

```
ignore device device_name
...
ignore device device_name
```

where:

Option	Description
device_name	Path to the storage device. For example, `/dev/rmt/tps0d6nrv`.

Step 4.   Save the changes and quit the edit session.

Step 5.   Stop the `mediad` process.

```
# mediad -k
```

Step 6.   Re-start the `mediad` process.

```
# mediad
```

Upgrading from FileServ Version 3.4.2 and Later

The Vista Database locking type was modified to use the IP locking mechanism. Therefore, to reinitialize the transaction activity file, follow the steps below:

Step 1.   Stop FileServ.

Step 2.   Run `checkpoint`.

Step 3.   Install the latest versions of FileServ.

Step 4.   Run `$FS_HOME/util/buildtaf -i`.

Step 5.   Execute "D" option.

Step 6.   Quit the program.

Step 7.   Restart FileServ.

Upgrading from FileServ Earlier than Version 3.4.2

Changing to the new Vista Database caused some changes to the database definition (`dbd`) files in existing FileServ sites. Therefore, to synchronize the database, follow the steps below:

Step 1.   Stop FileServ.

Step 2.   Run `checkDBAll` to make sure no errors exist in the FileServ database.

Step 3.   Run `checkpoint`.

Step 4.   Install the latest version of FileServ.

Step 5. Change directory to `$FS_HOME/internal/fsdb` and move each file with a `.dbd` extension to the *same name* `.dbd.old`. There should be one `fs1_#.dbd` and `fs5_#.dbd` file for each file system managed by FileServ.

```
cd $FS_HOME/internal/fsdb
mv fileserv2.dbd fileserv2.dbd.old
mv fileserv3.dbd fileserv3.dbd.old
mv fileserv4.dbd fileserv4.dbd.old
mv fs1_4.dbd fs1_4.dbd.old
mv fs5_4.dbd fs5_4.dbd.old
 ...
```

Step 6. Change directory to `DDL` and modify the `fs3.ddl` file by changing the 4 "long" references in mediadir_rec to "`a_u32_t`".

Step 7. If a `fs2.ddl.sgi` file exists, do the following:

```
mv fs2.ddl fs2.ddl.old
mv fs2.ddl.sgi fs2.ddl
```

Step 8. Run the following commands shown below:

```
ddlp fs2.ddl
ddlp fs3.ddl
ddlp fs4.ddl
```

Step 9. Remove `fileserv*.h`; move `fileserv*.dbd`, and change directory:

```
rm fileserv*.h
mv fileserv*.dbd ..
cd ..
```

Step 10. Modify the "fs1.ddl" file as follows:

a) Find the "record fileattr_rec {" line

b) Modify the following line from:

      char fadmhdl[64];   /* DMIG handle binary data */

    to:

      char fadmhdl[64][1];   /* DMIG handle binary data */

c) Find the "record dirdb_rec {" line

d) Modify the following line from:

      char drdmhdl[64];   /* DMIG handle binary data */

---

to:

> char drdmhdl[64][1];   /* DMIG handle binary data */

Step 11. Get the numbers for both the fileserv5 and fileserv1 databases to be regenerated by using `ls fs1_*.dbd.old`. For example, if `fs1_4.dbd.old` and `fs5_4.dbd.old` are returned the number is 4. There should be one pair of these files for each file system associated with FileServ. If the fs5_#.dbd.old file does not exist, make a note and do NOT run the `ddlp` for the fs5.ddl in Step 11 for this number (the fs1_4.dbd should still be run).

Step 12. For each of the numbers obtained above, modify the `fs1.ddl` and `fs5.ddl` files by changing the number to the current new number. For example, the `fs1.ddl` file will have a line similar to what is shown below:

```
database fs1_5 {
```

It should be changed to:

```
database fs1_4 {
```

Continue modifying all `_5` names to `_4` (there should be 17 of them for `fs1.ddl` file and 14 in the `fs5.ddl file`).

Step 13. Run both `ddlp fs1.ddl` and `ddlp fs5.ddl` commands to generate `fs1_#.dbd` and `fs1_#.dbd` files. Be sure to skip the fs5_#.dbd files if the corresponding fs5_#.dbd.old file did not exist in Step 9.

Step 14. Repeat Step 12. and Step 13. for all the numbers obtained in Step 11.

Step 15. Run `$FS_HOME/util/buildtaf -i`. At the prompt, type `D`.

Step 16. Start `lockmgr: lm_start`.

Step 17. Run `checkDBAll` and validate that no errors exist.

Installing FileServ and AMASS on the Same Platform

Step 1. If you have FileServ and AMASS on the same platform, start the FileServ processes before the AMASS processes (CR #1780).

Step 2. If the `autostart` scripts are enabled for both FileServ and AMASS, run the FileServ `autostart` script before the AMASS `autostart` script. To accomplish this, assign a name to the FileServ `autostart` script so it will start before the AMASS `autostart` script. An example of the FileServ and AMASS `autostart` script names in the `/etc/rc2.d` directory is shown below. In the example, the `S95fileserv` script will execute before the `S99amass` script.

```
lrwxrwxr-x 1 root sys 25 Jan 16 08:58 S95fileserv -> /etc/init.d/auto_fileserv
lrwxrwxr-x 1 root sys 25 Jan 16 08:58l S99amass -> /etc/init.d/amass
```

Contents of Version 4.4

OPERATING SYSTEMS

- IRIX® 6.5.6M, 6.5.7M, 6.5.8M, 6.5.9M and 6.5.10M

- SPARC™ Solaris™ 7 and 8

FIXED PROBLEMS

The following table lists fixed problems:

Operating System	Problem Number	Description of Problems Fixed in Version 4.4
All	539	The fsmedcopy command fails for some clustered tapes.
All	541	Cannot send a recover command to DTF drives with fs_scsi.
All	543	Return codes need to be MRS codes.
All	544	Overwrite occurs if clustering is enabled and unexpected EOT is hit.
All	545	Changes to decrease memory usage.
All	546	Space recalculation is not correct when EOT is hit.
All	547	A core dump occurs if open fails for fs_dump.file

Contents of Version 4.3

OPERATING SYSTEMS

- IRIX® 6.2, 6.5.4M, 6.5.5M, 6.5.6M, and 6.5.10M

- SPARC™ Solaris™ 2.6, 7, and 8

NEW DRIVE SUPPORT

- Additional drives supported by this release of FileServ include the following:

  - IBM 3580 LTO - Solaris only until supported by IRIX tpsc device driver

MAXIMUM NUMBER OF TAPE COPIES RAISED(#493)

- The maximum number of tape copies for a file has been raised to four.

FILESTEERING BY DRIVEPOOL(#517)

- The capability to specify which drives are used in making individual tape copies has been added to the filesteering filesize.config file. This capability allows a user with multiple archives to steer where different tape copies are made. This can be accomplished by creating different storage drivepools for each archive and then specifing the drivepool to be used for each copy in the filesize.config file.

FIXED PROBLEMS

- The following table lists fixed problems:

Operating System	Problem Number	Description of Problems Fixed in Version 4.3
All	393	Install Script - Change default syslog to 5
All	439	The fs_bld_maplist script fails on upgrade & not run on install
All	456	fileserv started as fsadm does not produce cores
Solaris	486	Cannot map filesystem due to buffer size
IRIX	487	Block reservation is lost after mount
All	488	File create and immediate rename leaves it unassociated
All	489	Fix memory leaks
All	490	fs_dump command can fail if a file is removed while it is running
All	491	Fix auto_fileserv to work with root shell of sh
IRIX	492	Add a check for DST to verify position
All	495	Crtl-C during a fsretrieve while mo is flipping causes crash
All	496	DTF/DTF2 fs_sysparm Comment Wrong
All	497	fs_copyman not intializing move requests properly
All	498	Memory overwrite in scsi code when using scsi pass through device

Operating System	Problem Number	Description of Problems Fixed in Version 4.3
All	499	Policy will trashcan file if db valid tape != disk
All	500	Checkpoint tar command needs to follow links
All	503	Mapping has /fs link hardcoded instead of using $FS_HOME
All	504	fs_dump fails if mount point not at root
All	505	fsckp script doesn't handle /mnt/vol05 mntpt
All	506	fspolicy not initializing hash lists
All	508	Change fs_bld_maplist to space out fs_map_dir
All	509	Add logfile to newfslog script
All	510	mda2 perf point causes fs_slave core on bmap
All	511	A Crtl-C causes fs_map_dir to core
All	512	Fix additional memory leaks
All	513	For DTF drives check sense for "recover" status and perform auto recover
All	514	Update install manual errors
All	516	fsup Alias Need To Be Modified for fslock3
All	518	During install the fsvsinstall fails with a syntax error
All	519	fsmederr man page out of date
All	520	Verification of drive type names is incorrect
All	521	fsrecover fails - fd leak, mem alignment problems
All	524	fs_cron_template needs to be updated
All	525	Install Script - Mapping directory not explained
All	531	Add check for were perl is installed
All	532	Wrong makefile included for api examples

Previous FileServ Releases

For information about previous features and fixes to the base software code, refer to prior "Release Notes." These Notes:

- Can be found on the secured site. See "Related Publications" on page 3 of these"Release Notes."

- Or, contact your FileServ sales representative.

Scheduled for Retirement

For a detailed list of operating systems and drives scheduled to be removed from future releases, refer to the list of "Discontinued Devices" available from your FileServ sales representative. Customers should plan to accommodate changes by the stated discontinued date.